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? Title: **JP11012207A2: IMPROVED CATALYST FOR HYDROGENATING AQUEOUS MALEIC ACID CAPABLE OF BEING HYDROGENATED TO PRODUCE BUTANEDIOL**

? Country: **JP Japan**  
 ? Kind: **A**

? Inventor: **JOHN G FRAY JR;  
 THOMAS G ATTIG;  
 JOHN R BUDGE;**

? Assignee: **STANDARD OIL CO:THE**  
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? Published / Filed: **Jan. 19, 1999 / June 11, 1997**

? Application Number: **JP1997000154056**

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 C07C 29/149; C07B 61/00;**

? Priority Number: **June 11, 1997 JP19971997154056**

? Abstract:

**PROBLEM TO BE SOLVED:** To provide a process for maximizing the production of 1,4-butanediol.

**SOLUTION:** This process for producing 1,4-butanediol contains a process for bringing a precursor capable of being hydrogenated into contact with a hydrogen-containing gas and a hydrogenation catalyst to catalytically hydrogenate the precursor. The hydrogenation catalyst contains at least one of the group VIII noble metals and at least one of rhenium, tungsten and molybdenum deposited on a carbon carrier. The carbon carrier is brought into contact with an oxidizing agent selected from nitric acid, hydrogen peroxide, sodium hypochlorite, ammonium persulfate and perchloric acid, before the metal is deposited.

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? Family: **None**

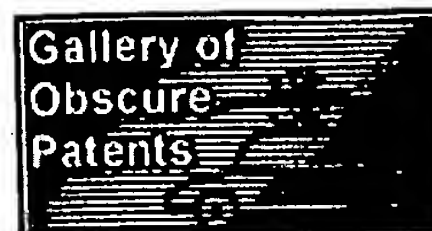
? Forward References:

PDF	Patent	Pub.Date	Inventor	Assignee	Title
	<a href="#">US6369445</a>	2002-04-09	Khoury; Theodore A.	Advantest Corporation	Method and apparatus for connection between elements of an integrated circuit

? Other Abstract Info: **CHEMABS 130(09)109961T CHEMABS 130(09)109961T DERABS C1999-148492 DE C1999-148492**

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(84) Designated contracting states:	(74) Representative:

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